IN THE CLAIMS

Please amend the claims as follows:

1-10. (Canceled)

11. (Currently amended) A processor according to claim 42 ~~41~~, wherein the third and fourth filters are log-domain filters comprising MOS transistors operating in weak inversion.

12. (Currently amended) A processor according to claim 42 ~~41~~, wherein the half-wave rectification means comprises means for applying a dc offset to the filtered signals.

13-29. (Canceled)

30. (Previously presented) A multi-channel analogue audio signal processor for use with a cochlear prosthesis, comprising:

an input for receiving an audio signal;

a plurality of outputs for connection to respective ones of cochlear implant electrodes;

a plurality of analogue signal processing channels coupled to the input, each channel comprising a tone control circuit comprising first and second log-domain filters having different low-pass bands and a subtractor for subtracting the output currents of the filters to produce a filtered signal, each of the filters comprising MOS transistors operating in weak inversion, and each of the filters being tuneable in the audio frequency range to adjust the low-pass cut-off frequency ; and

a tone generator for generating tones of preset amplitude and frequency dependent on the fundamental frequencies of the filters of the channels.

31. (Original) A processor according to claim 30, wherein each channel further comprises an amplifier having a controllable gain, the gain of which amplifier is adjustable by the adjustment means.

32. (Previously presented) A processor according to claim 30, wherein the adjustment means includes a control interface for allowing adjustment of the gain of each channel in response to control signals transmitted by a wireless remote control.

33. (Canceled)

34. (Previously presented) A processor according to claim 32, further comprising tone generator control means for selecting the frequency of the tone produced by the tone generator.

35. (Original) A processor according to claim 34, wherein the tone generator control means comprises a wireless remote control.

36. (Previously presented) A processor according to claim 30, where configured such that each channel is adjustable independently of all the other channels.

37. (Previously presented) A processor according to claim 30, further comprising sampling means coupling the channels to the outputs.

38. (Original) A processor according to claim 37, wherein the sampling means comprises a continuous interleaved sample generator.

39. (Previously presented) A processor according to claim 30, further comprising a plurality of biphase signal generators for supplying to the outputs biphase signals modulated by the output signals of the channels.

40. (Previously presented) An analogue signal processor, comprising

an audio signal input;

an output for providing a processed audio output signal;

a tone control circuit coupling the input and the output and comprising first and second log-domain filters having different low-pass bands and a subtractor for subtracting the output currents of the filters to produce a filtered signal, each of the filters comprising MOS transistors operating in weak inversion, each of the filters being tuneable in the audio-frequency range to adjust the low-pass cut-off frequency; and

a full-wave rectification means for full-wave rectifying the processed audio output signal

wherein the tone control circuit further comprises third and fourth filters having low-pass bands substantially identical to the first and second filters respectively and a further subtractor for subtracting the output currents of the third and fourth filters to produce a further filtered signal, and the full-wave rectification means comprises means coupled to the input for producing oppositely-phased audio signals from the input signal, one of the oppositely-phased audio signals being supplied to the first and second filters and the other of the oppositely-phased audio signals being supplied to the third and fourth filters, half-wave rectification means for half-wave rectifying the filtered signals from the first mentioned and further subtractors, and a combiner for combining the half-wave rectified signals to effect full-wave rectification.

41. (Previously presented) An analogue signal processor, comprising an audio signal input, an output for providing a processed audio output signal, a full-wave rectification means for full-wave rectifying the processed audio output signal, and a tone control circuit coupling the input and the output and comprising first and second log-domain filters having different low-pass bands and a subtractor for subtracting the output currents of the first and second filters to produce a filtered signal, each of the first and second filters comprising MOS transistors operating in weak inversion, and each of the first and second filters being tuneable in the audio frequency range to adjust the low-pass cut-off frequency, wherein the tone control circuit further comprises third and fourth filters having low-pass bands substantially identical to the first and second filters respectively and a second subtractor for subtracting the output currents of the third and fourth filters to produce a second filtered signal, and the full-wave rectification means comprises means coupled to the input for producing oppositely-phased audio signals from the

input signal, one of the oppositely-phased audio signals being supplied to the first and second filters and the other of the oppositely-phased audio signals being supplied to the third and fourth filters, half-wave rectification means for half-wave rectifying the filtered signals from the first and second subtractors, and a combiner for combining the half-wave rectified signals to effect full-wave rectification.

42. (New) An analogue signal processor, comprising an audio signal input, an output for providing a processed audio output signal, and a tone control circuit coupling the input and the output and comprising first and second log-domain filters having different low-pass bands and a subtractor for subtracting the output currents of the filters to produce a filtered signal, each of the filters comprising MOS transistors operating in weak inversion, and each of the filters being tuneable in the audio frequency range to adjust the low-pass cut-off frequency.

43. (New) A processor according to claim 42, further comprising a compressor coupling the input to the tone control circuit for compressing the dynamic range of the input signal.

44. (New) A processor according to claim 43, wherein the compressor is a voltage-to-current converter.

45. (New) A processor according to claim 43, wherein the compressor comprises MOS transistors operating in weak inversion.

46. (New) A processor according to claim 45 wherein the compressor is configured to provide control of sensitivity.

47. (New) A processor according to claim 42, further comprising an amplifier for amplifying the filtered output signal of the tone control circuit.

48. (New) A processor according to claim 42, wherein the input signal is current signal.

49. (New) A processor according to claim 42, further comprising a biphase signal generator for supplying to the output a biphase signal modulated by the processed audio output signal.

50. (New) A processor according to claim 42, further comprising full-wave rectification means for full-wave rectifying the processed audio output signal.